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DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

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DOGMA
MINERALS PROGRAM
FILE COPY

Reply to: State of Utah
Division of Water Quality
Department of Environmental Quality
Salt Lake City, Utah 84114-4870

August 12, 1991

Mr. Frank Wicks, Vice Pres. & Gen. Manager
Barrick Mercur Gold Mines
P.O. Box 838
Tooele, Utah

RECEIVED

AUG 19 1991

DIVISION OF
OIL GAS & MINING

RE: Reservation Canyon Tailings
Impoundment, 1991 Construction:
Conditional Finding of Insignificant
Modification

Dear Mr. Wicks:

This letter is to document our meetings of May 23 and June 20, 1991 regarding the 1991 construction on the tailings impoundment. We are also in receipt of your letters of June 13 and 27, 1991 regarding the proposed neutralization of tailings from the Barrick Mercur Gold Mine.

During our meeting of May 23, 1991 you informed us of the need to expedite raising the Main Dam, Reclaim Levee, and impoundment liner in order to avoid overtopping the existing structures or shutdown of the milling process and mine. As you were aware, your April 27, 1982 Construction Permit limited the storage capacity of the tailings impoundment to 9.8 million cubic yards, which corresponds to a Main Dam elevation of 7260 feet. This capacity has nearly been exhausted. As you explained, the 1991 construction would amount to raising the Main Dam, Reclaim Levee, and impoundment liner by 10 feet to an elevation of 7,270 feet. As stated in your May 29, 1991 letter, this would result in a 3.7% increase in the height of the Main Dam and a 4.2% increase in the liner area; when comparing the 1991 construction against 1983 thru 1990 construction. You stated that the latest date construction could begin would be July 15, 1991. You requested that we approve this year's construction so that operation of the mine would not need to be halted. You also offered to install a cyanide neutralization process to pretreat the tailings before deposition in the impoundment. As you explained, the capability of the treatment system could neutralize the tailings effluent down to less than 1 ppm cyanide. During the meeting we expressed our concern that Barrick should have provided sufficient time to review the proposed modifications and issue both the Construction and Ground Water Discharge Permits before July 15, 1991, if such permits were found necessary.

Your letters of June 13 and 27, 1991 reaffirmed your commitment to install the cyanide neutralization equipment, including submittal of an installation schedule by August 1, 1991, full-

scale operation by December 31, 1991 and a one year test period until December 31, 1992. In contrast to what you stated in our May 23, 1991 meeting, your June 27, 1991 letter indicated that the lowest level the neutralization system could economically obtain would be something less than 10 ppm total cyanide. We agree with your suggestion that we both should assess the value of cyanide neutralization; however, please be advised that neutralization is being considered in lieu of liner modification. Ground water monitoring will still be required of the facility, because the tailings pond does now and will continue to discharge a leachate to ground water, even after facility expansion.

During an inspection by our staff on June 11, 1991, we were informed that construction of the upstream buttress on the Main Dam had begun on June 3, 1991. This precipitated our meeting of June 20, 1991, wherein you acknowledged that the upstream buttress construction on the Main Dam was underway and that the concrete apron to the buttress seepage containment system had been constructed late last year.

Conditional Finding of Insignificant Modification

After review of the items submitted and discussed, and after consideration of all the available facts, we have determined that the proposed 1991 tailings pond construction consisting of raising the Main Dam, Reclaim Levee and clay liner by a maximum of 10 feet to an elevation of 7270 feet is an *insignificant modification* of the April 27, 1982 Construction Permit, based upon the following conditions:

1. The height of the Main Dam, Reclaim Levee, and clay liner will remain at or below a maximum elevation of 7,270 feet above mean sea level.
2. The surface area of the clay liner will not exceed 3,804,000 ft².
3. Maximum tailings pond head elevation shall not exceed 7,266 feet above mean sea level.
4. Barrick will submit a complete and comprehensive plan for daily monitoring and control of the water level elevation in the impoundment on or before August 14, 1991, and initiate said monitoring within 5 days of Executive Secretary approval. This plan will include monthly written reporting to the Executive Secretary by the 15th day of the following month.
5. Barrick will submit a complete and comprehensive engineering design, specifications, process description, and installation schedule for the cyanide neutralization process equipment on or before October 15, 1991. This report must fully describe the available technologies and justify both the treatment technology selected and the proposed treatment levels for cyanide. Based on your commitment in our meeting of May 23, 1991 and the

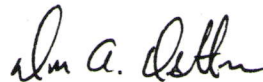
low concentration expected for the cyanide ground water protection level, we anticipate the treatment level to be as close to 1 ppm total cyanide as both technically and economically feasible. This evaluation will also include an assessment of the overall value of neutralization at the design treatment level.

6. Barrick will complete installation of the approved cyanide neutralization system and begin full-scale operation of the system on or before January 15, 1992.
7. Barrick will submit a plan for construction quality assurance and quality control (CQA/QC) and receive Executive Secretary approval before any construction of the clay liner begins.
8. Barrick will make application for and secure both Construction and Ground Water Discharge Permits for the tailings facility before any dam, levee, or liner construction above the 7,270 foot elevation begins.
9. Barrick will submit an "As-Built Report" to document the 1991 construction at the tailings facility within 30 days of completion of construction.

If you have any questions or comments please call Loren Morton or C.C. Patel of our staff at 538-6146. We look forward to your submittal of the above information and future compliance.

Sincerely,

Utah Water Quality Board



Don A. Ostler, P.E.
Executive Secretary

DAO:lbm/ccp:lm

cc: Fred Nelson, Utah Attorney General's Office
Dave Bird, Parsons, Behle, & Latimer
Wayne Hedberg, DOGM
Glade Shelley, Utah County Health Dept.
Joe Trujillo, Tooele County Health Dept.